



2811

ATMI-510-CIP  
Customer ID No.: 25559

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Thomas H. Baum, et al.

Group Art Unit: 2811

U.S. Application No.: 09/954,831

Examiner: TBA

#2

Filed: September 18, 2001

Title: SOURCE REAGENT COMPOSITIONS FOR CVD FORMATION OF GATE  
DIELECTRIC THIN FILMS USING AMIDE PRECURSORS AND METHOD OF  
USING SAME

CERTIFICATE OF MAILING

Date of Deposit: December 17, 2001

I hereby certify that this Information Disclosure Statement is being deposited with the United States Postal, Postage Prepaid to Addressee" service under 37 CFR 1.8 on the date indicated above and is addressed Assistant Commissioner for Patents, Washington, DC 20231.

Lee Ann DiLello

(Typed or printed name of person mailing paper or fee)

*Lee Ann DiLello*

(Signature of person mailing paper or fee)

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**INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. §1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- ☒ 1. This Information Disclosure Statement is being filed within three months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. No certification or fee is required in accordance with 37 CFR § 1.56 and § 1.97(b).

- ☐ 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection or Notice of Allowance.
- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was the first citation of such item by a foreign patent office in a counterpart foreign application, which occurred no more than three months prior to filing the Information Disclosure Statement. 37 C.F.R. §1.97(e)(1).
- ☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. §1.97(e)(2).
- ☐ c. Attached is our check no. \_\_\_\_ in the amount of \$240 in payment of the fee under 37 C.F.R. §1.17(p). Please credit or debit Deposit Account No. 50-0860 as needed to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached.
- ☐ 3. This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Applicant(s) hereby petition(s) that the Information Disclosure Statement be considered. Attached is our check no. \_\_\_\_ in the amount of \$130.00 in payment of the petition fee under 37 C.F.R. §1.17(i)(1). Please credit or debit Deposit Account No. \_\_\_\_ as needed to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached.
- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was the first citation of such item by a foreign patent office in a counterpart foreign application which occurred no more than three months prior to filing the Information Disclosure Statement. 37 C.F.R. §1.97(e)(1).
- ☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. §1.97(e)(2).
- ☐ 4. (other):

Applicant does not believe that any additional fee is due in connection with the foregoing. However, any deficiencies may be charged to the deposit account 50-0860.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. McLauchlan, III', with a long horizontal flourish extending to the right.

Robert A. McLauchlan, III  
Registration No. 44,924  
Attorney for Applicant

Date: **December 17, 2001**  
Advanced Technology Materials, Inc.  
7 Commerce Drive  
Danbury, CT 06810  
Attorney Ref: 510-CIP

FORM PTO-1449		US Dept. of Commerce Patent and Trademark Office		ATTORNEY DOCKET NO. 510 CIP		SERIAL NO. 09/954,831	
INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)				APPLICANT Thomas H. Baum, et al.			
				FILING DATE September 18, 2001		GROUP 2811	

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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
	AA	6,159,855	12/12/00	B. Vaartstra			
	AB	6,013,553	1/11/00	R. Wallace, et al.			
	AC	5,820,678	10/13/98	Hubert, et al.			
	AD	5,204,314	4/20/93	Peter S. Kirlin, et al.			
	AE	5,536,323	7/16/96	Peter S. Kirlin, et al.			
	AF	09/414,133		Thomas H. Baum, et al.			10/7/99
	AG	6,015,917	1/18/2000	G. Bhandari, et al.			
	AH	5,972,430	10/26/99	Frank DiMeo, Jr.			
	AI	5,919,522	7/6/99	Thomas H. Baum, et al.			
	AJ	6,110,529	8/28/2000	Robin A. Gardiner, et al.			
	AK	5,820,664	10/13/98	Robin A. Gardiner, et al.			
	AL	5,536,323	7/16/96	Peter S. Kirlin, et al.			
	AM	07/927,134		Peter S. Kirlin, et al.			8/7/92
	AN	5,453,494	9/26/95	Peter S. Kirlin, et al.			
	AO	5,280,012	1/18/94	Peter S. Kirlin, et al.			
	AP	07/615,303		Duncan W. Brown			11/19/90
	AQ	5,225,561	7/6/93	Peter S. Kirlin, et al.			
	AR	07/549,389					7/6/90
	AS	5,876,503	3/2/99	Jeffrey F. Roeder et al.			

FOREIGN PATENT DOCUMENTS							
DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLAS S	TRANSLATION YES NO		

OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)							

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EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

FORM PTO-1449		US Dept. of Commerce Patent and Trademark Office		ATTORNEY DOCKET NO. 510 CIP		SERIAL NO. 09/954,831	
INFORMATION DISCLOSURE STATEMENT (use several sheets if necessary)				APPLICANT Thomas H. Baum, et al.			
				FILING DATE September 18, 2001		GROUP TBA	

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PATENT DOCUMENTS							
EXAMINER INITIAL	PATENT NUMBER	FILING DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
BA	5,976,991	12/2/99	R. Laxman, et al.				
BB	6,177,135	1/23/01	Frank S. Hintermaier, et al.				
BC	4,895,709	1/23/90	Richard M. Laine				
BD	5,139,825	8/18/92	Gordon, et al.				
BE	5,003,092	3/26/91	Orville T. Beachley, Jr.				
BF	5,178,911	1/12/93	Roy G. Gordon, et al.				
BG	6,060,406	5/9/00	Glen B. Alers, et al.				
BH	5,924,012	7/13/99	Brian A. Vaartstra				
BI	6,020,243	2/1/00	Robert M Wallace, et al.				

FOREIGN PATENT DOCUMENTS							
DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS	SUBCLASSES	TRANSLATION YES      NO		
					X		
					(abstract only)		

OTHER DOCUMENTS (Including Author, Title, Journal-Date, Page Number, Etc.)	
BJ	Jones, et al., "MOCVD of Zirconia Thin Films by Direct Liquid Injection Using a New Class of Zirconium Precursor", Chem. Vap. Dep., Vol. 4, 1998, pp. 46-49.
BK	D.C. Bradley, et al., "Metalorganic Compounds Containing Metal-Nitrogen Bonds: Part I, Some Dialkylamino Derivatives of Titanium and Zirconium", J. Chem. Soc., 1960, 3857).
BL	D.C. Bradley, et al., "Metalorganic Compounds Containing Metal-Nitrogen Bonds: Part III. Dialkylamino Compounds of Tantalum", Canadian J. Chem., 40, 1355 (1962)
BM	S. Giles, et al., "Deposition of (Ti,Al)N thin films by organometallic chemical vapor deposition: thermodynamic predictions and experimental results", Elsevier Science, SA, Surface and Coatings Technology, 94-95 (1997), pgs. 285-290.
BN	Kozoh Sugiyama, et al., "Low Temperature Deposition of Metal Nitrides by Thermal Decomposition of Organometallic Compounds", Journal of the Electrochemical Society, Vol. 122, No. 11, Nov. 1975
BO	R. Juza, et al., "Ammonothermal Synthesis of Magnesium and Beryllium Amides", Angew. Chem. Int. Ed., 5, (2), 247 (1966).

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